

We Claim:

1. A method of determining a combination of electronic coupons (e-coupons) for  
5 redemption by a retailer in a networked environment, said method including the steps of:  
determining if a selection of e-coupons complies with redeeming conditions in relation to a  
purchase;

checking said selection of e-coupons complying with said redeeming conditions to  
determine if two or more of said e-coupons are mutually exclusive; and

10 displaying said selection of e-coupons complying with said redeeming conditions and  
being non-mutually exclusive.

2. The method according to claim 1, further including the step of selecting by a user  
said selection of e-coupons from a plurality of e-coupons.

15 3. The method according to claim 1, further including the step of providing a  
suggestion to a user of an optimal or near optimal selection of e-coupons.

20 4. The method according to claim 1, further including the step of providing a  
recommendation to a user regarding an additional purchase enabling said user to avail of more  
discounts.

25 5. The method according to claim 1, wherein said e-coupons reside at any one of the  
group consisting of a user's site, a third party's site, and a site of said retailer in said  
networked environment.

6. The method according to claim 1, wherein said displayed selection of e-coupons is  
dependent upon optimization parameters.

7. The method according to claim 1, wherein said networked environment is implemented utilizing one or more of the group consisting of the Internet, an Intranet, an Extranet, a local area network, an ATM network, a wide area network and a wireless network.

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8. An apparatus for determining a combination of electronic coupons (ecoupons) for redemption by a retailer in a networked environment, said apparatus including:  
means for determining if a selection of e-coupons complies with redeeming conditions in relation to a purchase;

10 means for checking said selection of e-coupons complying with said redeeming conditions to determine if two or more of said e-coupons are mutually exclusive; and

means for displaying said selection of e-coupons complying with said redeeming conditions and being non-mutually exclusive.

15 9. The apparatus according to claim 8, further including means for selecting by a user said selection of e-coupons from a plurality of e-coupons.

10. The apparatus according to claim 8, further including means for providing a suggestion to a user of an optimal or near optimal selection of e-coupons.

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11. The apparatus according to claim 8, further including means for providing a recommendation to a user regarding an additional purchase enabling said user to avail of more discounts.

25 12. The apparatus according to claim 8, wherein said e-coupons reside at any one of the group consisting of a user's site, a third party's site, and a site of said retailer in said networked environment.

13. The apparatus according to claim 8, wherein said displayed selection of e-coupons is dependent upon optimization parameters.

14. The apparatus according to claim 8, wherein said networked environment is implemented utilizing one or more of the group consisting of the Internet, an Intranet, an Extranet, a local area network, an ATM network, a wide area network and a wireless network.

15. A computer program product having a computer readable medium having a computer program recorded therein for determining a combination of electronic coupons (ecoupons) for redemption by a retailer in a networked environment, said computer program product including:

computer program code means for determining if a selection of e-coupons complies with redeeming conditions in relation to a purchase;

computer program code means for checking said selection of e-coupons complying with said redeeming conditions to determine if two or more of said e-coupons are mutually exclusive; and

computer program code means for displaying said selection of e-coupons complying with said redeeming conditions and being non-mutually exclusive.

16. The computer program product according to claim 15, further including computer program code means for selecting by a user said selection of e-coupons from a plurality of e-coupons.

17. The computer program product according to claim 15, further including computer program code means for providing a suggestion to a user of an optimal or near optimal selection of e-coupons.

18. The computer program product according to claim 15, further including computer program code means for providing a recommendation to a user regarding an additional purchase enabling said user to avail of more discounts.

5 19. The computer program product according to claim 15, wherein said e-coupons reside at any one of the group consisting of a user's site, a third party's site, and a site of said retailer in said networked environment.

10 20. The computer program product according to claim 15, wherein said displayed selection of e-coupons is dependent upon optimization parameters.

15 21. The computer program product according to claim 15, wherein said networked environment is implemented utilizing one or more of the group consisting of the Internet, an Intranet, an Extranet, a local area network, an ATM network, a wide area network and a wireless network.

22. A method for electronic coupon (e-coupon) decision support, said method including the steps of:

20 computing a set of applicable e-coupons dependent upon a set of e-coupons of a user;  
determining if said computed set of e-coupons complies with one or more redeeming conditions and is not mutually exclusive; and  
displaying said computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive.

25 23. The method according to claim 22, wherein said computing step is also dependent upon order information.

24. The method according to claim 22, further including the steps of, if said computed set of e-coupons contains at least one e-coupon failing to comply with said redeeming

conditions:

displaying said computed set of e-coupons; and  
enabling said user to select another set of e-coupons for use in said computing step.

5        25. The method according to claim 24, further including the step of:  
displaying exclusive coupons in said another selected set of e-coupons to said user.

26. The method according to claim 25, further including the step of:  
displaying coupons in said another selected set of e-coupons that are exclusive and fail  
10 to comply with said redeeming conditions to said user.

27. The method according to claim 22, further including the step of processing a  
purchase order for said displayed, computed set of e-coupons determined to comply with said  
redeeming conditions and not being mutually exclusive.  
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28. The method according to claim 22, further including the step of saving said  
displayed, computed set of e-coupons determined to comply with said redeeming conditions  
and not being mutually exclusive and choosing another subset of said e-coupons.

20        29. The method according to claim 28, further including the steps of comparing by a  
user two or more saved sets of e-coupons and choosing one of saved sets of e-coupons.

30. The method according to claim 22, further including the step of recommending to  
said user a set of e-coupons determined to comply with said redeeming conditions and not  
25 being mutually exclusive.

31. The method according to claim 22, further including the step of a user viewing  
reports of e-coupon usage statistics and savings.

32. The method according to claim 22, further including the step of finding an optimal set of e-coupons dependent upon optimization parameters.

33. The method according to claim 32, wherein said finding step is implemented using an optimization engine, said optimization engine addressing one or more conditions selected from the group consisting of:

an AND condition among product purchase redemption conditions;

an AND condition among category purchase redemption conditions;

an XOR condition among product purchase redemption conditions;

an XOR condition among category purchase redemption conditions; and

a coupon purchase condition on total amount and coupons with heterogeneous purchase conditions.

34. The method according to claim 22, further including the step of:

providing recommendations to said user, based on said user's profile, in relation to a user selected set of e-coupons.

35. The method according to claim 22, wherein said e-coupons reside at any one of the group consisting of a user's site, a third party's site, and a site of said retailer in said networked environment.

36. An apparatus for electronic coupon (e-coupon) decision support, said apparatus including:

means for computing a set of applicable e-coupons dependent upon a set of e-coupons of a user;

means for determining if said computed set of e-coupons complies with one or more redeeming conditions and is not mutually exclusive; and

means for displaying said computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive.



37. The apparatus according to claim 36, wherein said computing means is also dependent upon order information.

5 38. The apparatus according to claim 36, further including means for, if said computed set of e-coupons contains at least one e-coupon failing to comply with said redeeming conditions:

displaying said computed set of e-coupons; and

enabling said user to select another set of e-coupons for use in said computing step.

10 39. The apparatus according to claim 38, further including means for displaying exclusive coupons in said another selected set of e-coupons to said user.

15 40. The apparatus according to claim 39, further including means for displaying coupons in said another selected set of e-coupons that are exclusive and fail to comply with said redeeming conditions to said user.

20 41. The apparatus according to claim 36, further including means for processing a purchase order for said displayed, computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive.

25 42. The apparatus according to claim 36, further including means for saving said displayed, computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive and choosing another subset of said e-coupons.

43. The apparatus according to claim 42, further including:

means for comparing by a user two or more saved sets of e-coupons; and

means for choosing one of said saved sets of e-coupons.

44. The apparatus according to claim 36, further including means for recommending to said user a set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive.

5 45. The apparatus according to claim 36, further including means for finding an optimal set of e-coupons dependent upon optimization parameters.

46. The apparatus according to claim 45, wherein said finding means is implemented using an optimization engine, said optimization engine addressing one or more conditions  
10 selected from the group consisting of:

an AND condition among product purchase redemption conditions;

an AND condition among category purchase redemption conditions;

an XOR condition among product purchase redemption conditions;

an XOR condition among category purchase redemption conditions; and

15 a coupon purchase condition on total amount and coupons with heterogeneous purchase conditions.

47. The apparatus according to claim 36, further including:

means for providing recommendations to said user, based on said user's profile, in  
20 relation to a user selected set of e-coupons.

48. The apparatus according to claim 36, wherein said e-coupons reside at any one of the group consisting of a user's site, a third party's site, and a site of said retailer in said networked environment.

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49. A computer program product having a computer readable medium having a computer program recorded therein for electronic coupon (e-coupon) decision support, said computer program product including:

computer program product means for computing a set of applicable e-coupons



dependent upon a set of e-coupons of a user;

computer program product means for determining if said computed set of e-coupons complies with one or more redeeming conditions and is not mutually exclusive; and

5 computer program product means for displaying said computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive.

50. The computer program product according to claim 49, wherein said computer program product means for computing is also dependent upon order information.

10 51. The computer program product according to claim 49, further including computer program product means for, if said computed set of e-coupons contains at least one e-coupon failing to comply with said redeeming conditions:

displaying said computed set of e-coupons; and

15 enabling said user to select another set of e-coupons for use in said computing step.

52. The computer program product according to claim 51, further including computer program product means for displaying exclusive coupons in said another selected set of e-coupons to said user.

20 53. The computer program product according to claim 52, further including computer program product means for displaying coupons in said another selected set of e-coupons that are exclusive and fail to comply with said redeeming conditions to said user.

25 54. The computer program product according to claim 49, further including computer program product means for processing a purchase order for said displayed, computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive.

55. The computer program product according to claim 49, further including computer program product means for saving said displayed, computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive and choosing another subset of said e-coupons.

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56. The computer program product according to claim 55, further including:  
computer program code means for comparing by a user two or more saved sets of e-coupons; and  
computer program code means for choosing one of said saved sets of e-coupons.

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57. The computer program product according to claim 49, further including computer program product means for recommending to said user a set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive.

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58. The computer program product according to claim 49, further including computer program product means for finding an optimal set of e-coupons dependent upon optimization parameters.

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59. The computer program product according to claim 58, wherein said computer program product means for finding is implemented using an optimization engine, said optimization engine addressing one or more conditions selected from the group consisting of:

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an AND condition among product purchase redemption conditions;  
an AND condition among category purchase redemption conditions;  
an XOR condition among product purchase redemption conditions;  
an XOR condition among category purchase redemption conditions; and  
a coupon purchase condition on total amount and coupons with heterogeneous purchase conditions.

60. The computer program product according to claim 49, further including:

computer program product means for providing recommendations to said user, based on said user's profile, in relation to a user selected set of e-coupons.

5        61. The computer program product according to claim 49, wherein said e-coupons reside at any one of the group consisting of a user's site, a third party's site, and a site of said retailer in said networked environment.

62. An electronic coupon (e-coupon) decision support system, said system including:

10       means for computing a set of applicable e-coupons dependent upon a set of e-coupons of a user;

means for determining if said computed set of e-coupons complies with one or more redeeming conditions and is not mutually exclusive; and

15       means for displaying said computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive.

63. The system according to claim 62, further including:

20       an optimization engine for determining a subset of coupons from said computed set of e-coupons determined to comply with said redeeming conditions and not being mutually exclusive dependent upon optimization parameters.

64. The system according to claim 62, further including:

25       a recommendation engine for providing recommendations regarding one or more further purchases to a user, based on said user's profile, after said user has selected a set of coupons to use.

65. The system according to claim 62, wherein said system is located at a retailer's site, a user's site, or a third party site in a network.

66. The system according to claim 62, wherein said e-coupons are located at a retailer's site, a user's site, or a third party site in a network.

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